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## PALM INTRANET

### Application Number Information

Application Number: 09/670113

#### Assignments

Filing Date: 09/26/2000

Effective Date: 09/26/2000

Application Received: 09/27/2000

Patent Number:

Issue Date: 00/00/0000

Date of Abandonment: 00/00/0000

Attorney Docket Number: 60299

Status: 71 /RESPONSE TO NON-FINAL OFFICE ACTION ENTERED  
AND FORWARDED TO EXAMINER

Confirmation Number: 4862

Examiner Number: 79747 / PATEL, SHEFALI

Group Art Unit: 2621

Class/Subclass: 382/100.000

Lost Case: NO

Interference Number:

Unmatched Petition: NO

L&R Code: Secrecy Code:1

Third Level Review: NO

Secrecy Order: NO

Status Date: 02/20/2004

Oral Hearing: NO

Title of Invention: METHODS OF PROCESSING TEXT FOUND IN IMAGES

Bar Code	PALM Location	Location Date	Charge to Loc	Charge to Name	Employee Name	Location
09670113	26X1	02/24/2004	No Charge to Location	No Charge to Name	PATEL,SHEFALI	PK1/04/A07

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## Inventor Name Search Result

Your Search was:

Last Name = CONWELL

First Name = WILLIAM

Application#	Patent#	Status	Date Filed	Title	Inventor Name 16
<u>60327687</u>	Not Issued	159	10/05/2001	DIGITAL WATERMARKING METHODS, PROGRAMS AND APPARATUS	CONWELL, WILLIAM Y.
<u>60257822</u>	Not Issued	159	12/21/2000	WATERMARK SYSTEMS AND METHODS	CONWELL, WILLIAM Y.
<u>60198857</u>	Not Issued	159	04/21/2000	AUTHENTICATING METADATA AND EMBEDDING METADATA IN WATERMARKS OF MEDIA SIGNALS	CONWELL, WILLIAM Y.
<u>10448544</u>	Not Issued	093	05/29/2003	SUBSTITUTING INFORMATION BASED ON WATERMARK-ENABLED LINKING	CONWELL, WILLIAM Y.
<u>10265348</u>	Not Issued	030	10/04/2002	DIGITAL WATERMARKING METHODS, PROGRAMS AND APPARATUS	CONWELL, WILLIAM Y.
<u>09888339</u>	Not Issued	041	06/21/2001	CONTENT IDENTIFIERS TRIGGERING CORRESPONDING RESPONSES THROUGH COLLABORATIVE PROCESSING	CONWELL, WILLIAM Y.
<u>09840018</u>	Not Issued	030	04/20/2001	AUTHENTICATING METADATA AND EMBEDDING METADATA IN WATERMARKS OF MEDIA SIGNALS	CONWELL, WILLIAM Y.
<u>09670113</u>	Not Issued	071	09/26/2000	METHODS OF PROCESSING TEXT FOUND IN IMAGES	CONWELL, WILLIAM Y.
<u>09633587</u>	Not Issued	041	08/07/2000	DOCUMENT MANAGEMENT USING ADHESIVE NOTES	CONWELL, WILLIAM Y.
<u>09630243</u>	Not	095	07/31/2000	DIGITAL WATERMARKS AND	CONWELL,

	Issued			TRADING CARDS	WILLIAM Y.
<u>09578551</u>	Not Issued	123	05/25/2000	METHODS OF LEASING VIRTUAL ADDRESSES	CONWELL, WILLIAM Y.
<u>09515826</u>	Not Issued	093	02/29/2000	PAPER PRODUCTS AND PHYSICAL OBJECTS AS MEANS TO ACCESS AND CONTROL A COMPUTER OR TO NAVIGATE OVER OR ACT AS A PORTAL ON A NETWORK	CONWELL, WILLIAM Y
<u>09504239</u>	Not Issued	071	02/15/2000	DATA TRANSMISSION BY WATERMARK PROXY	CONWELL, WILLIAM Y.
<u>09502542</u>	Not Issued	061	02/10/2000	METHOD AND SYSTEM FOR FACILITATING ON-LINE SHOPPING	CONWELL, WILLIAM Y
<u>09476686</u>	Not Issued	041	12/30/1999	PERSONAL AUDIO APPLIANCE	CONWELL , WILLIAM Y.
<u>09449503</u>	Not Issued	161	11/24/1999	ANALYTIC METHOD AND APPARATUS EMPLOYING PATENT DATA	CONWELL , WILLIAM Y.

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Inventor Name	City	State/Country
CONWELL, WILLIAM Y.	PORTLAND	OREGON

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## Searching for multimedia on the World Wide Web

Swain, M.J.

Res. Lab., Compaq Comput. Corp., Cambridge, MA , USA;

*This paper appears in: **Multimedia Computing and Systems, 1999. IEEE International Conference on***

Meeting Date: 06/07/1999 - 06/11/1999

Publication Date: 7-11 June 1999

Location: Florence Italy

On page(s): 32 - 37 vol.1

Volume: 1

Reference Cited: 12

Number of Pages: 2 vol. (xlix+909+1127)

Inspec Accession Number: 6331165

### Abstract:

The proliferation of multimedia on the World Wide Web has led to the introduction of Web search engines for images, video and audio. On the Web, multimedia is embedded within documents that provide a wealth of indexing information. However, computational constraints imposed by the economics of advertising-supported search restrict the complexity of analysis that can be performed at query time and users are unwilling to do much more than type a keyword or two to input a query. Therefore, primary sources of information for indexing multimedia documents are text cues extracted from HTML pages and multimedia document headers. Off-line analysis of content of multimedia documents can be successfully employed in Web search when combined with these other information sources. Content analysis can be used to categorize and summarize multimedia, in addition to providing cues for finding documents.

### Index Terms:

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## Implementation of embedded streaming of large vi application using object-relational database and PH

Mann, R.S. Devgan, S.S.

 Dept. of Electr. & Comput. Eng., Tennessee State Univ., Nashville, TN, USA;  
 This paper appears in: **Southeastcon 2000. Proceedings of the IEEE**

Meeting Date: 04/07/2000 - 04/09/2000

Publication Date: 7-9 April 2000

Location: Nashville, TN USA

On page(s): 201 - 204

Reference Cited: 6

Number of Pages: xviii+542

Inspec Accession Number: 6656788

### Abstract:

There has been much interest in databases that store multimedia data, which static media, like text and images, and dynamic or continuous media, like audio. Conventional database systems are designed for managing textual and data. Storing and retrieving such data is often based on simple comparisons of numerical values. However, this method of storing and retrieval is not adequate for multimedia data, since the digitized representation of these data types does not reflect the reality of these media items. The conventional method is to store the large multimedia data in a file server and store the associated metadata in a database. Retrieval is done by downloading the files from one computer to the user's computer before playing it. The large size of these files results in long download times. This paper proposes an alternative method of storing multimedia data along with its associated metadata in an object-relational database. The proposed method offers faster time, secured backup, and concurrent login. The paper shows how database systems can be architected to support multimedia data, making use of an object-relational system such as PostgreSQL. The main challenge is delivering data over the Web for real time video streaming. The results show that there is a significant change in access rate and Web access time when data is stored in a single database instead of a distributed server. The application of a multimedia database thus created can be used in application domains such as digital libraries, training and education, medical applications containing X-rays, etc.

### Index Terms:

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# IMPLEMENTATION OF EMBEDDED STREAMING FOR LARGE VIDEO APPLICATIONS USING OBJECT-RELATIONAL DATABASE AND PHP

Ravneet S. Mann, Dr. Satinderpaul S. Devgan  
Department of Electrical and Computer Engineering  
Tennessee State University

## ABSTRACT

There has been much interest in databases that store multimedia data, which comprises of static media, like text and images, and dynamic or continuous media, like audio and video. Conventional database systems are designed for managing textual and numerical data. Storing and retrieving such data is often based on simple comparisons of text or numerical values. However, this method of storing and retrieval is not adequate for the multimedia data, since the digitized representation of these data types does not convey the reality of these media items. The conventional method is to store the large multimedia data in a file server and store the associated metadata in a database. The retrieval is done by downloading the files from one computer to the user's computer before playing it. The large size of these files results in long download times. This paper proposes an alternative method of storing multimedia data along with its associated metadata in an object-relational database as it offers several advantages over file storage system. The proposed method offers faster retrieval time, secured backup, and concurrent login. This paper shows how database systems can be architected to support multimedia data making use of object-relational database system such as PostgreSQL. The main challenge is delivering data over the web using real-time video streaming. The results show that there is a significant change in retrieval rate and web access time, when data is stored in a single database instead of a file server. The application of multimedia database thus created can be used in different application domains such as digital libraries, training and education, medical databases containing X-rays, etc.

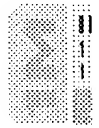
## INTRODUCTION

During the past three decades, the database technology for information systems has undergone many changes. The transition from one generation to the next has always been necessitated by the ever-increasing complexity of database applications. There has been much interest in databases that store multimedia data, such as images, audio, and video. Multimedia data have certain attributes that complicate their storage in conventional databases [3]. First, it tends to be very voluminous and second, the continuous media data, such as audio and video has timing characteristics associated with it and often has descriptive attributes, such as when it was created, who created it, and to what category does it belong. When the number of multimedia objects is relatively small, features provided by databases are usually not that important but database functionality becomes very important when the number of multimedia objects stored is large [2]. Examples of

dynamic applications include digital libraries, training and education, medical data containing X-rays, police documents in the database that may contain fingerprints etc. To support modern applications that use multimedia data, it is quite clear that there is need for database functionality to support multimedia data effectively and then share it over the web.

## NEED ANALYSIS

Consider a multimedia database with built in multimedia seminar presentation. This presentation may be about a historical event. If multimedia information is added to this tutorial, not only will the students be able to understand the contents better, there will be less need for textual description from the instructor. Direct lectures in the form of movie clips can be integrated with the conventional data. Thus, the presentation may include the history of the lecture, when it was conducted and if there is reference material concerning the lecture, etc.

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*Garofalakis, J.; Kappos, P.; Sirmakessis, S.; Tzimas, G.;*

 Digital Signal Processing Proceedings, 1997. DSP 97., 1997 13th International Conference on , Volume: 2 , 2-4 July 1997  
 Pages:833 - 836 vol.2

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**1 Searching with numbers**
*Agrawal, R.; Srikant, R.;*

Knowledge and Data Engineering, IEEE Transactions on , Volume: 15 , Issue: 4 , July-Aug. 2003

Pages:855 - 870

[\[Abstract\]](#)   [\[PDF Full-Text \(4423 KB\)\]](#)   **IEEE JNL**
**2 Seek, and ye shall find [Web search engines comparison]**
*Filman, R.; Pena-Mora, F.;*

Internet Computing, IEEE , Volume: 2 , Issue: 4 , July-Aug. 1998

Pages:78 - 83

[\[Abstract\]](#)   [\[PDF Full-Text \(140 KB\)\]](#)   **IEEE JNL**
**3 A research and application on relevancy of text vector model based specific corpus**
*Zhang Youhua; Xiong Fanlun; Hang Xiaoshu; Yuan Hongchun;*

Intelligent Control and Automation, 2002. Proceedings of the 4th World Congress on , Volume: 2 , 10-14 June 2002

Pages:1672 - 1675 vol.2

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**4 Mining the Web with active hidden Markov models**
*Scheffer, T.; Decomain, C.; Wrobel, S.;*

Data Mining, 2001. ICDM 2001, Proceedings IEEE International Conference on Nov.-2 Dec. 2001

Pages:645 - 646

[\[Abstract\]](#) [\[PDF Full-Text \(364 KB\)\]](#) IEEE CNF

---

**5 Implementation of embedded streaming of large video application in object-relational database and PHP**

*Mann, R.S.; Devgan, S.S.;*

Southeastcon 2000. Proceedings of the IEEE , 7-9 April 2000

Pages:201 - 204

[\[Abstract\]](#) [\[PDF Full-Text \(284 KB\)\]](#) IEEE CNF

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**6 Searching for multimedia on the World Wide Web**

*Swain, M.J.;*

Multimedia Computing and Systems, 1999. IEEE International Conference on , Volume: 1 , 7-11 June 1999

Pages:32 - 37 vol.1

[\[Abstract\]](#) [\[PDF Full-Text \(664 KB\)\]](#) IEEE CNF

---

**7 Cmew/U-a multimedia Web annotation sharing system**

*Hirotsu, T.; Takada, T.; Aoyagi, S.; Sato, K.; Sugawara, T.;*

TENCON 99. Proceedings of the IEEE Region 10 Conference , Volume: 1 , 15-Sept. 1999

Pages:356 - 359 vol.1

[\[Abstract\]](#) [\[PDF Full-Text \(560 KB\)\]](#) IEEE CNF

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